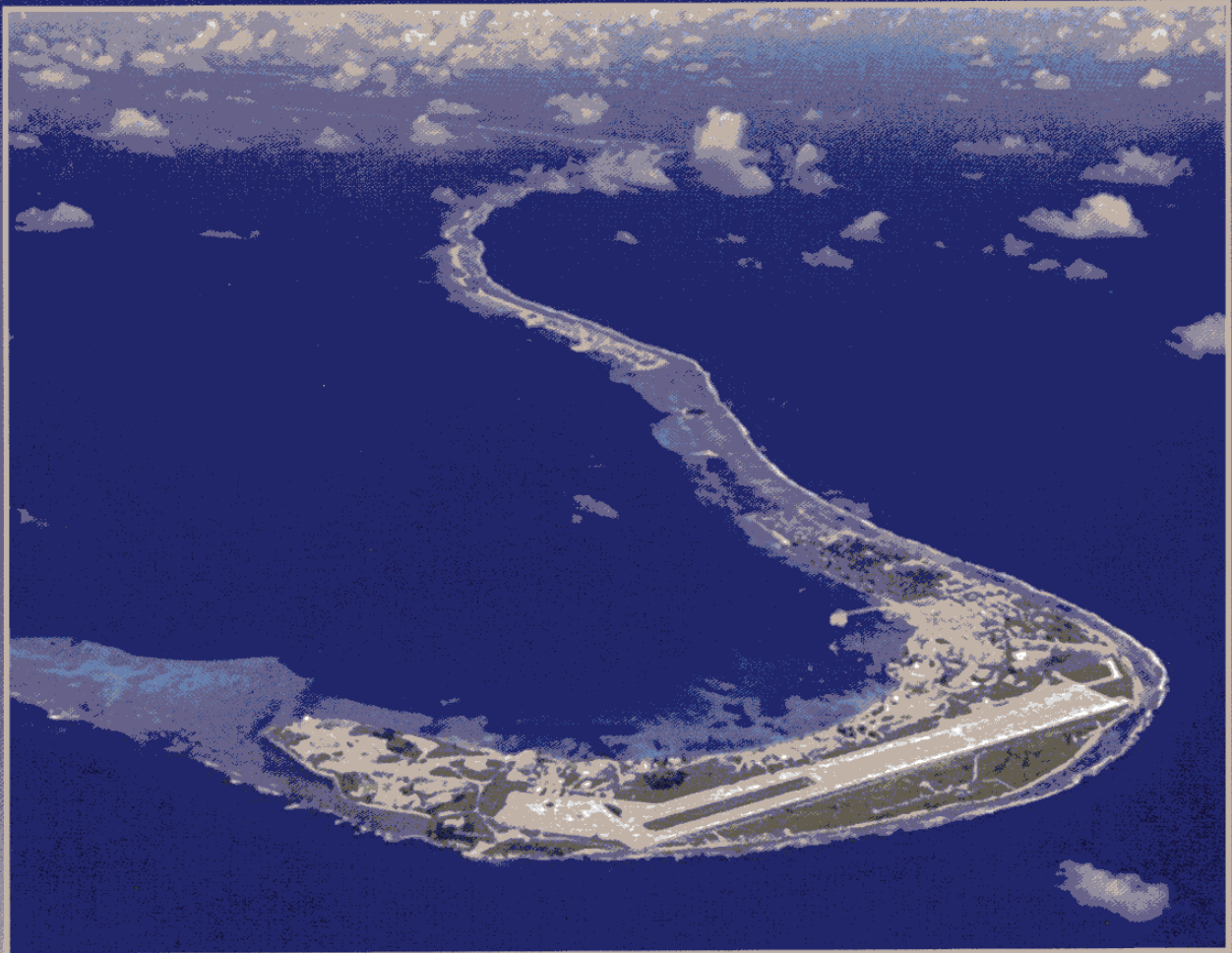


nuclear **weapons** journal



November/December 2003

- ☐ Kwajalein Journal ☐ Replacing S5370 ☐ HE Engineering ☐
☐ Environmental Management System ☐

Weapons Science and Engineering at Los Alamos National Laboratory

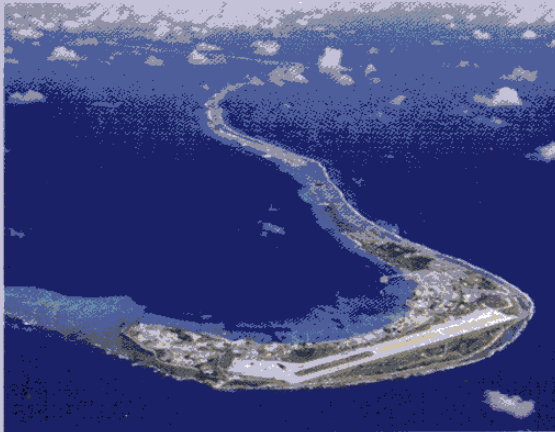
November/December 2003 LALP-03-011

Nuclear Weapons Journal is an unclassified publication.

Los Alamos National Laboratory

Mail Stop A107

Los Alamos, NM 87545



About the cover: Special flight tests for weapons systems are conducted at the Kwajalein Test Site, a US Army facility now known as the Ronald Reagan Ballistic Missile Defense Test Site. Recently, Los Alamos personnel participated in a flight mission for the W78/Mk12A system, which impacted in the area of the Kwajalein Atoll.

Nuclear Weapons Journal highlights accomplishments in the nuclear weapons program at Los Alamos National Laboratory. *NWJ* is funded by the Weapons Physics and Weapons Engineering and Manufacturing Directorates. The Weapons Communication Team produces *NWJ* bimonthly:

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BACKWARD GLANCE

A-Bomb Trigger Man

Testing nuclear weapons is not without risk, as Los Alamos staff member John C. “Jack” Clark found out—not once, but three times in the early 1950s.

Jack Clark joined the Laboratory in May 1946, after being discharged from the US Army. He initially worked on ultrahigh-speed radiographic studies of detonation phenomena and strong shocks of metals. Within a year, he became Assistant J-Division Leader and subsequently Associate Division Leader. In these capacities, Clark also assumed the mantle of Test Director, a role that ultimately earned him the title “A-Bomb Trigger Man.”

On October 20, 1951, shot Able in the Buster-Jangle series failed to detonate. As Test Director, Clark had to climb the tower and disarm the device. The shot fired successfully three days later.

However, Clark faced a similar situation within a year when, on May 20, 1952, shot Fox in the Tumbler-Snapper series failed to detonate. Clark had ordered that the elevator in the tower be removed prior to the test. So after waiting an hour to see what might happen, he began the long rung-by-rung climb up the 300-foot-high shot tower, carrying a hacksaw and accompanied by John Wieneke and Barney O’Keefe. Upon nearing the top, Clark used the hacksaw to open

the door to the shot cab, which had been wired shut as a safety precaution. The bomb was quickly disarmed, and diagnostics showed that a malfunctioning measuring device had automatically blocked the firing circuit.

Clark’s experience with nuclear weapons problems did not end with disarming the Fox device. During Operation Castle in 1954, Clark was among those forced to take refuge in a control bunker when the Bravo detonation doubled yield expectations and the blast wave and fallout covered the entirety of Bikini Atoll. Clark and company were eventually rescued by helicopter after radiation levels dropped sufficiently.

Clark left Los Alamos in March 1957 to work on the Atlas Intercontinental Ballistic Missile program at General Dynamics. When NASA modified the Atlas missile, he contributed to John Glenn’s orbital mission. In 1963, Clark became a Foreign Service Officer serving as the scientific attaché in the US Embassy in Cairo. He retired from the State Department in



1966, just prior to the cessation of diplomatic relations with Egypt. Jack Clark died in July 2002 at age 98.

